

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P475237

Luminaire Tested: **22CZ2-24VHE-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475237  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24VHE-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2216.8 lumens  
Efficiency: N/A  
Efficacy: 134.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

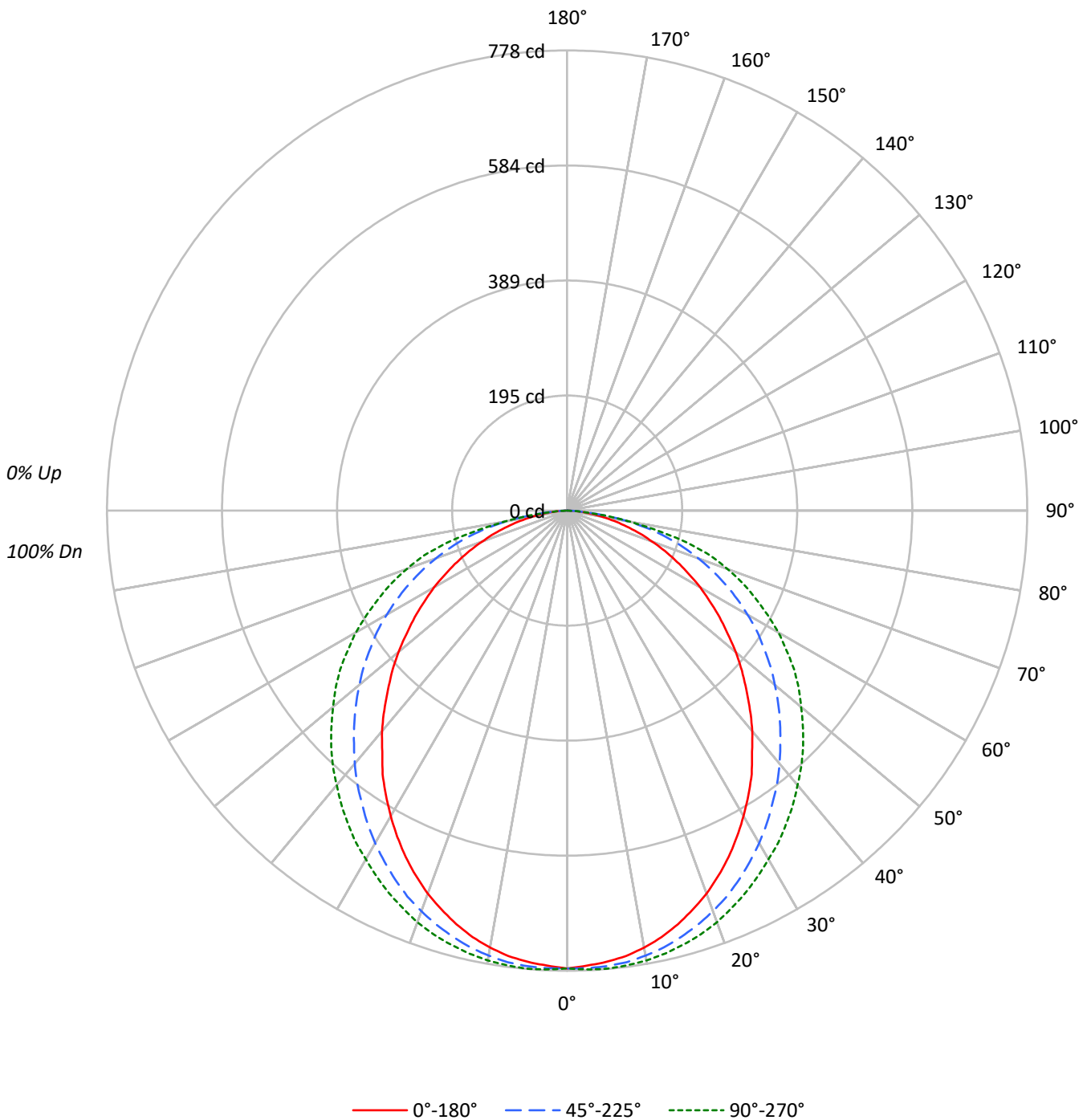
Input Watts (W): 16.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2084	2084	2084
5°	2069	2089	2100
10°	2050	2087	2110
15°	2017	2078	2116
20°	1973	2064	2121
25°	1918	2043	2118
30°	1854	2017	2115
35°	1787	1987	2122
40°	1711	1963	2129
45°	1630	1938	2146
50°	1559	1920	2163
55°	1476	1905	2197
60°	1399	1897	2220
65°	1306	1882	2238
70°	1200	1854	2268
75°	1083	1805	2188
80°	930	1599	1647
85°	747	942	747



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.4	3.3
10°-20°	209.9	9.5
20°-30°	315.3	14.2
30°-40°	376.0	17.0
40°-50°	388.7	17.5
50°-60°	357.4	16.1
60°-70°	284.5	12.8
70°-80°	173.8	7.8
80°-90°	37.8	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	598.6	27.0
0°-40°	974.5	44.0
0°-60°	1720.7	77.6
0°-90°	2216.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2216.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	766	768	773	776	778	73
15°	724	732	746	756	760	204
25°	646	662	688	707	713	297
35°	544	567	605	637	646	339
45°	428	459	509	550	564	331
55°	315	349	406	452	468	281
65°	205	240	296	337	351	203
75°	104	135	174	204	210	111
85°	24	30	30	26	24	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	774.3	774.3	774.3	774.3	774.3
2.5°	770.1	771.2	774.3	776.5	776.5
5°	765.9	768.0	773.3	776.5	777.6
7.5°	759.7	762.8	770.1	774.3	775.5
10°	750.2	754.4	763.9	770.1	772.2
12.5°	738.6	744.9	756.5	764.9	767.0
15°	723.9	732.3	745.9	756.5	759.7
17.5°	707.0	717.5	734.4	747.1	751.3
20°	689.1	699.7	720.8	735.4	740.7
22.5°	668.2	681.8	706.0	722.9	727.1
25°	646.0	661.8	688.1	707.0	713.3
27.5°	621.8	640.8	669.2	692.4	697.6
30°	596.6	616.6	649.2	674.4	680.7
32.5°	570.2	593.4	628.1	656.5	665.0
35°	543.9	567.1	604.9	636.6	646.0
37.5°	513.4	540.8	582.9	615.5	627.1
40°	487.1	513.4	558.7	594.5	606.1
42.5°	457.7	486.1	533.5	572.3	586.1
45°	428.2	458.7	509.2	550.3	564.0
47.5°	400.8	431.3	484.0	527.2	540.8
50°	372.4	404.0	458.7	502.9	516.6
52.5°	341.9	376.6	433.4	477.7	493.5
55°	314.6	349.3	406.1	452.4	468.3
57.5°	286.2	321.9	380.9	425.1	439.8
60°	259.9	294.6	352.5	395.6	412.5
62.5°	231.4	267.2	324.0	366.2	382.0
65°	205.1	239.9	295.6	336.7	351.4
67.5°	178.8	213.6	266.1	305.1	321.9
70°	152.5	187.3	235.6	273.6	288.3
72.5°	129.5	160.0	206.2	241.0	254.6
75°	104.2	134.7	173.6	204.1	210.4
77.5°	81.0	108.4	141.0	154.6	156.8
80°	60.0	81.0	103.2	106.3	106.3
82.5°	39.9	55.8	64.1	65.2	64.1
85°	24.2	29.5	30.5	26.3	24.2
87.5°	8.4	8.4	5.2	3.1	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)